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(71) Applicant  
Teresa Genevieve Marsh  
30 Rowley Lane, Littleover, Derby, DE23 7FT,  
United Kingdom

(72) Inventor  
Teresa Genevieve Marsh

(74) Agent and/or Address for Service  
Teresa Genevieve Marsh  
30 Rowley Lane, Littleover, Derby, DE23 7FT,  
United Kingdom

(51) INT CL<sup>5</sup>  
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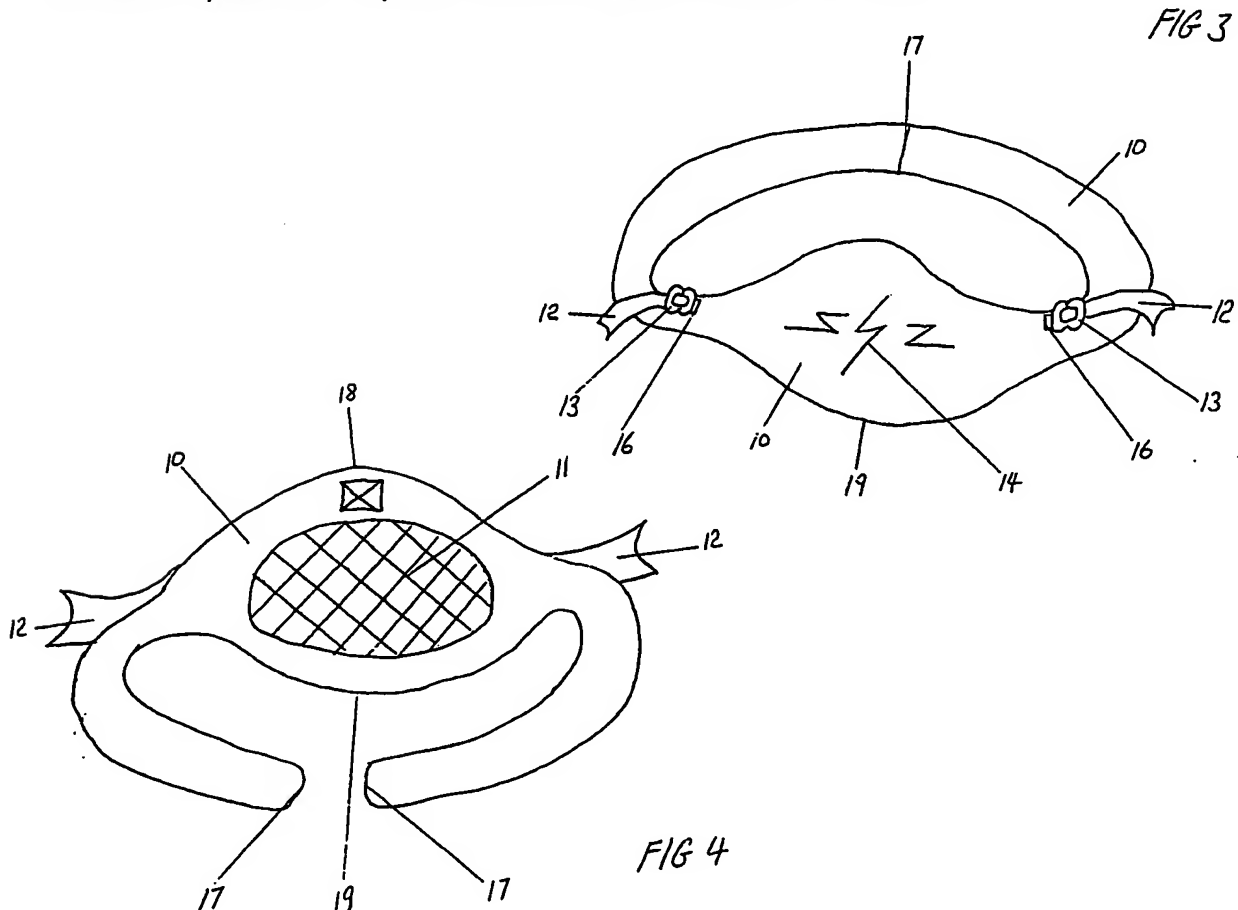
(52) UK CL (Edition L)  
A5T TCS TCX  
A3V V12H

(56) Documents cited  
GB 2236681 A GB 2162758 A GB 2057891 A  
GB 1588442 A GB 1566679 A GB 1449285 A  
US 4688566 A US 4657010 A US 4195629 A  
US 3699958 A

(58) Field of search  
UK CL (Edition K) A5T TCS TCT TCX  
INT CL<sup>5</sup> A62B

(54) All in one face mask

(57) A face mask for covering nose, mouth and part of the chin is made of two-way stretch fabric 10 with a sewn-in durable filter 11 made of such material as three layers of muslin cloth and provided with an elastic strap 12 mounting adjustable sliders 13 at either side of the mask for a snug fit, the strap and a design 14 on the mask front are in fluorescent colours to enable them to be seen at night by car headlamps. The mask is generally intended to give aid in protection against breathing-in unpleasant smells and dust, as in street pollution whilst walking/jogging through town and is lightweight, stretchable and pocket-size. It may be worn also as a headband or sweatband (not shown).



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FIG 1

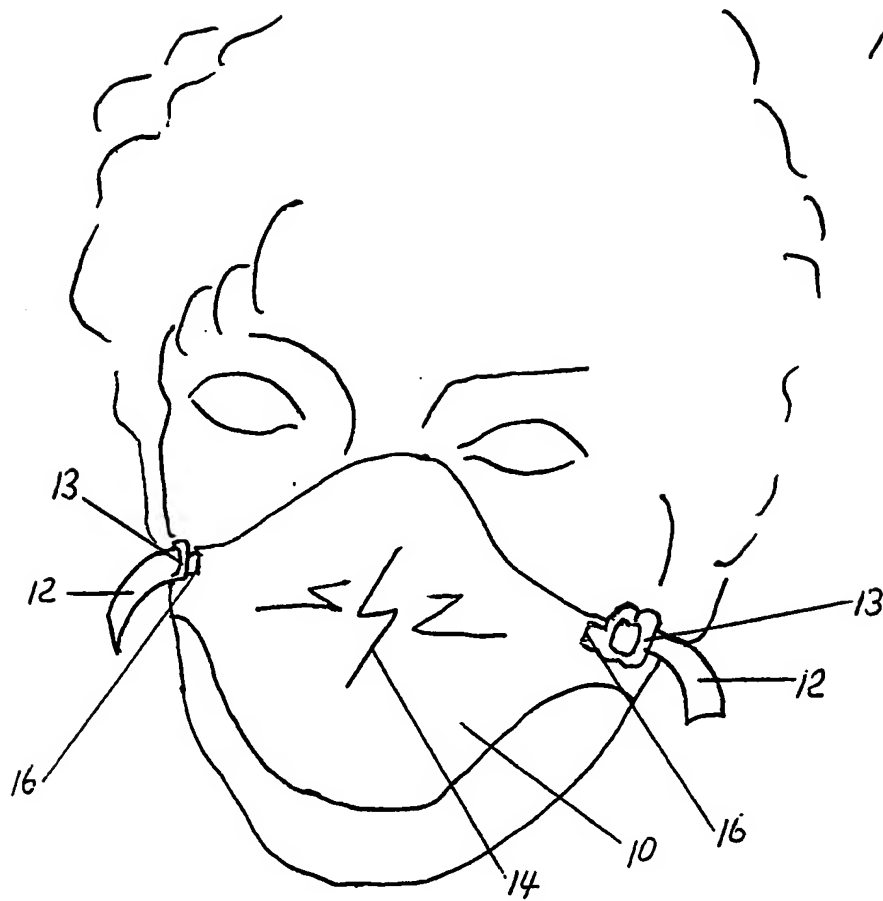


FIG 2

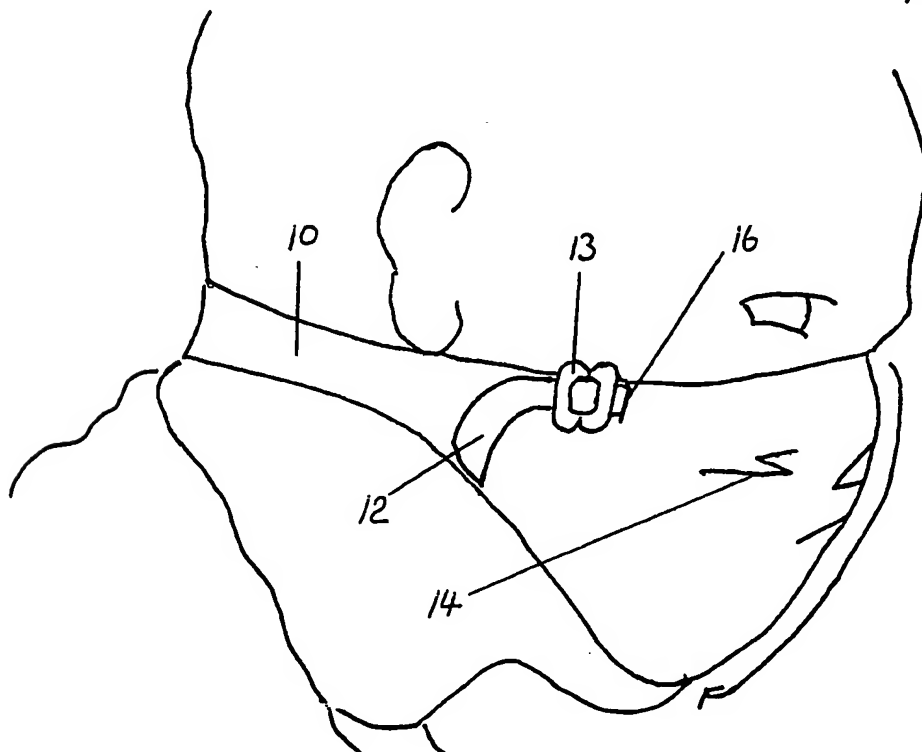


FIG 3

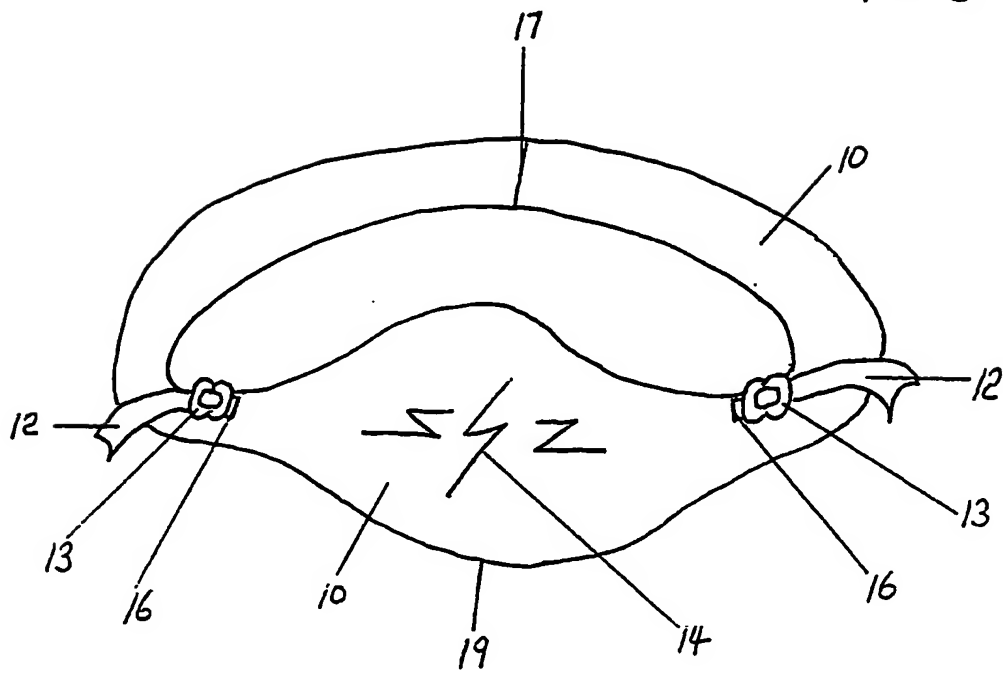
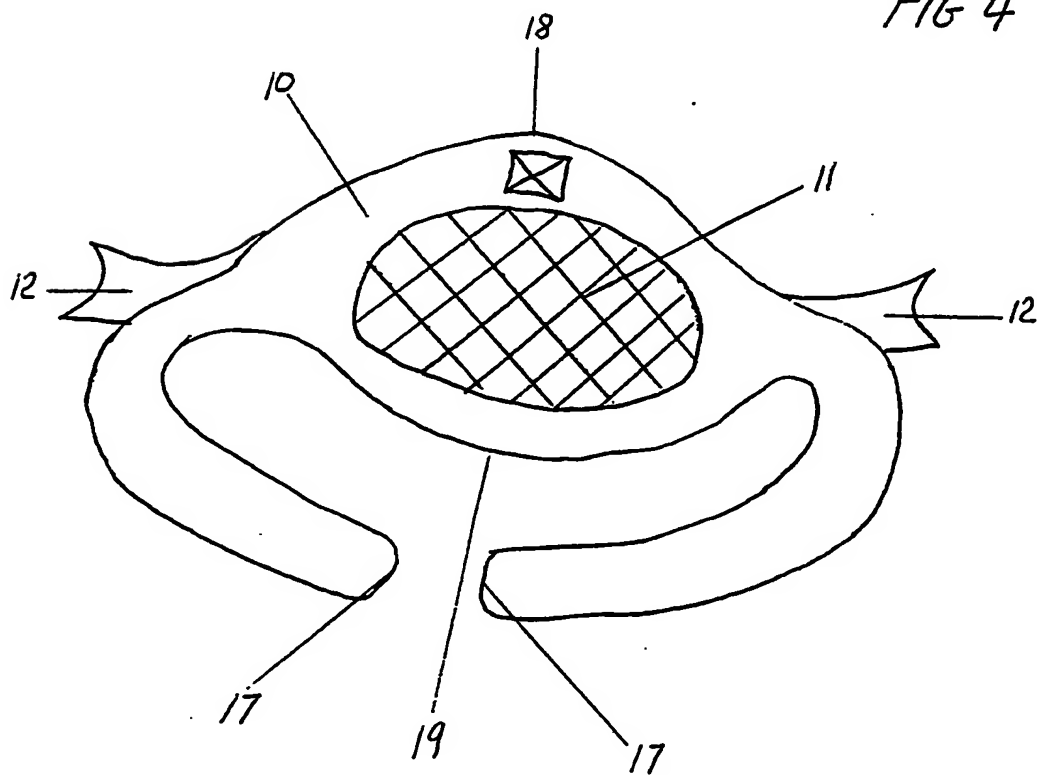


FIG 4



### *ALL IN ONE FACE MASK*

*THIS INVENTION RELATES TO A FACE MASK COVERING BOTH NOSE AND MOUTH WITH BUILT-IN FILTER.*

*THERE ARE VARIOUS TYPES OF FACE MASKS KNOWN ALREADY AND CURRENTLY USED BY PEOPLE WORKING IN HAZARDOUS ENVIRONMENTS, FOR EXAMPLE, FOR PROTECTION AGAINST CHEMICAL SPRAYING, SMOKE FROM FIRE AND WORKING IN HOSPITALS ARE THE USUAL REASONS FOR WEARING A MASK. THESE TYPES OF FACE MASKS BASICALLY CONSIST OF MOULDED PLASTICS OR HARD FRAMES OF METAL AND RUBBER WITH SEPARATE DISPOSABLE FILTERS.*

*DESIGNED WITH SPECIFIC JOBS IN MIND, THEY ARE NOT ALWAYS FREELY AVAILABLE TO THE PUBLIC, FOR GENERAL PURPOSES AND CAN BE HARSH AND UGLY TO WEAR, RATHER BULKY AND UNCOMFORTABLE. NOT PRACTICABLE OR PRESENTABLE FOR SAY, WALKING THROUGH TOWN. MY CHILDRENS' LAST SCHOOL WAS SITUATED INSIDE AN ARMY CAMP, NEXT TO AN ARMoured TANK UNIT, WHICH OFTEN*

FORCED US TO WALK PAST WITH A HANDKER-  
CHIEF HELD OVER OUR FACES IN ORDER TO  
ESCAPE FROM THE UNPLEASANT SMELLS CAUSED  
BY THE TRAFFIC THERE. THIS THEN LED TO  
THE IDEA OF A POCKET-SIZED FACE MASK  
WITH A "BUILT-IN" FILTER WHICH COULD BE  
WORN INTERMITTENTLY BY CHILDREN TOO.

ACCORDING TO THE PRESENT INVENTION THERE  
IS PROVIDED AN ALL IN ONE, GENERAL PUR-  
POSE, PERSONAL FACE MASK, COVERING NOSE  
AND MOUTH COMPRISING OF STRETCH MATERIAL  
WITH ATTACHED FILTER, SEWN ON MADE OF  
THREE TO FOUR LAYERS OF SOFT MUSLIN THAT  
IS DURABLE AND WASHABLE. LIGHTWEIGHT AND  
POCKET-SIZED, IT CONTAINS AN ADJUSTABLE  
STRAP ON PLASTIC SLIDERS FOR A SNUG FIT;  
THE STRAP AND DESIGN ON THE FRONT OF  
THE MASK BEING IN FLUORESCENT COLOURS  
TO ENABLE IT TO BE SEEN AT NIGHT. TO  
BE WORN INTERMITTENTLY AS AN AID IN  
GUARDING AGAINST BREATHING IN DUST  
AND UNPLEASANT SMELLS, FOR EXAMPLE,

WHILST WALKING/JOGGING THROUGH TOWN. PUSHED OVER THE HEAD, IT GOES AROUND THE NECK WHEN NOT IN USE AND BROUGHT UP TO COVER NOSE AND MOUTH WHEN NEEDED WITH THE SIDES LYING JUST UNDER THE EARLOBES. CAN BE PUSHED UP ONTO THE TOP OF THE FOREHEAD TO USE AS A HEADBAND OR SWEATBAND.

A SPECIFIC BREAKDOWN OF THE INVENTION WILL NOW BE DESCRIBED BY WAY OF EXAMPLE WITH REFERENCE TO THE ACCOMPANYING DRAWING IN WHICH : -

FIGURE 1 SHOWS IN PERSPECTIVE THE FACE MASK IN POSITION ON THE FRONT OF THE FACE;

FIGURE 2 SHOWS IN PERSPECTIVE THE FACE MASK ON THE FACE IN PROFILE;

FIGURE 3 SHOWS THE FACE MASK ON ITS OWN-FRONT VIEW;

FIGURE 4 SHOWS THE FACE MASK ON ITS OWN-BACK VIEW.

REFERRING TO THE DRAWINGS THE FACE MASK COMPRISES OF STRETCH FABRIC 10, A FILTER 11 MADE UP OF THREE TO FOUR LAYERS OF SOFT MUSLIN SEWN ON TO FABRIC 10, A FLAT STRIP OF ELASTIC 12 TO ACT AS ADJUSTABLE STRAP AND TWO PLASTIC SLIDERS 13.

USING A TWO-WAY STRETCH FABRIC SUCH AS LYCRA CUT OUT SHAPE AS SHOWN IN FIG 1 MAKING IT LONG ENOUGH TO STRETCH AROUND TO THE BACK OF THE NECK. WHEN THE MASK IS COMPLETED AS SHOWN IN FIG 3 IT SHOULD STRETCH ENOUGH TO GO OVER THE HEAD BUT NOT BE SO SLACK AS TO NOT STAY PUT IN POSITION AROUND THE NOSE, MOUTH AND CHIN. THE TWO ENDS OF THE MASK 17 FIG 4 ARE SEWN TOGETHER AS SHOWN IN FIG 3 IN THE FINAL STAGE. THE HEIGHT CAN ROUGHLY BE OBTAINED BY MEASURING THE AREA ON THE FACE FROM BETWEEN THE EYES AND THE CHIN AS SHOWN IN FIG 2. AT EITHER SIDE OF THE NOSE

AND MOUTH, THE MASK SHOULD CURVE GENTLY INWARDS AND TAPER TO THE BACK OF THE NECK. THE MASK WOULD ALSO COVER MOST OF THE CHIN. ALLOW FOR HEMS; THE TOP HEM AT THE TOP PART OF MASK 18 MUST ACCOMMODATE THE ELASTIC 12, WHICH WOULD BE ABOUT ONE CENTIMETRE WIDE. WITH THE STRETCH FABRIC CUT OUT AND READY TO USE, WORKING ON THE WRONG SIDE WHICH IS THE BACK VIEW AS SHOWN IN FIG 4, TURN FABRIC OVER AT THE TOP TOWARD SELF AND HEM ALL THE WAY ALONG TO ENDS 17. WITH THE ENDS LEFT OPEN THE ELASTIC MAY BE INSERTED USING A SAFETY PIN (NOT SHOWN). THE ELASTIC SHOULD BE SEEN AT EITHER END. MAKE THE ELASTIC EVEN THEN PUT A FEW STITCHES IN THE MIDDLE TO FIX IT IN PLACE; X MARKS THE SPOT IN FIG 4. FOLD THE FABRIC IN HALF, LENGTH WAYS SO THAT ELASTIC AT BOTH ENDS ARE LYING ON TOP OF EACH OTHER AND THE OUTLINE SHAPE RESEMBLES THAT IN FIG 2.



ROUGHLY EIGHT CENTIMETRES ALONG FROM THE RIGHT HAND SIDE, MAKE A SMALL BUTTON-HOLE TYPE OF INCISION INTO THE MIDDLE OF THE TOP HEM, JUST ENOUGH TO BRING THE ELASTIC OUT LEAVING THE OTHER SIDE OF THE HEM INTACT. TURN OVER AND REPEAT ON THE OTHER SIDE. THE POSITION FOR THE TWO INCISIONS 16 ARE BEST SHOWN IN FIG 3. WEAVE ELASTIC STRIP 12 INTO SLIDERS 13 EITHER SIDE OF MASK LEAVING IT TO DANGLE BUT CUT IF OVER LONG. TURNING THE FABRIC OVER AND WORKING ON THE WRONG SIDE, HEM ALL ALONG THE BOTTOM SIDE OF MASK 19 AND ALSO HEM EACH END 17. TURNING THE MASK OVER TO RIGHT SIDE AS IN FIG 3 APPLY DESIGN 14 TO THE MIDDLE AREA USING FLUORESCENT STRIPS OF MATERIAL AND/OR FLUORESCENT THREAD. BOTH THE DESIGN ON THE FRONT OF THE MASK AND THE ELASTIC STRIP 12 WHICH ACTS AS AN ADJUSTABLE STRAP ARE IN FLUORESCENT COLOURS TO ENABLE IT TO BE SEEN AT NIGHT. TURN MASK OVER TO WRONG SIDE AND STITCH IN THE FILTER 11 PLACED

AS SHOWN IN FIG 4. THE FILTER CONSISTING OF THREE LAYERS OF SOFT MUSLIN IS CUT OUT IN AN OVAL SHAPE WITH THE RAW EDGES NEATLY SEWN. THE TWO ENDS IT ARE NOW SEWN TOGETHER THUS CREATING AN ALL IN ONE FACE MASK WITH SEWN IN FILTER WHICH IS DURABLE AND WASHABLE. LIGHT-WEIGHT AND POCKET SIZE WITH AN ADJUSTABLE STRAP ON PLASTIC SLIDERS IN A FLUORESCENT COLOUR, AS IS THE DESIGN ON THE FRONT. FOR GENERAL PURPOSES, IT COULD BE USED BY ANYONE LIKE A PEDESTRIAN, WORN INTERMITTENTLY, TO GIVE AID IN THE PROTECTION AGAINST BREATHING IN UNPLEASANT SMELLS AND DUST. TO BE WORN AROUND THE NECK WHEN NOT IN USE AND AND BROUGHT UP TO COVER THE NOSE AND MOUTH AREA WHEN NEEDED AND RESTING JUST UNDER THE EARLOBES. PUSHING IT UP FURTHER TO THE FOREHEAD, IT CAN BE USED AS A HEADBAND AND ALSO A SWEATBAND (NOT SHOWN).

## CLAIMS

1. A FACE MASK COMPRISING BUILT-IN FILTER ALL IN ONE, GENERAL PURPOSE, COVERING THE NOSE, MOUTH AND CHIN AREA, OF TWO-WAY STRETCH FABRIC WITH ATTACHED DURABLE FILTER MADE OF SUCH MATERIAL AS THREE LAYERS OF MUSLIN CLOTH SEWN ON TO STRETCH FABRIC. AN ELASTIC STRIP IN A FLUORESCENT COLOUR ON SLIDERS EITHER SIDE OF THE MASK TO ACT AS AN ADJUSTABLE STRAP FOR A SNUG FIT WHICH CAN BE SEEN AT NIGHT FROM CAR HEADLAMPS; AS CAN THE DESIGN ON THE FRONT. LIGHTWEIGHT, POCKET-SIZE AND WASHABLE IT COULD BE USED BY ANY ONE, LIKE A PEDESTRIAN, WORN INTER-MITTENTLY, TO GIVE AID IN THE PROTECTION AGAINST BREATHING IN UNPLEASANT SMELLS AND DUST. TO BE WORN AROUND THE NECK WHEN NOT IN USE AND BROUGHT UP TO COVER THE NOSE, MOUTH AND CHIN AREA WHEN NEEDED AND RESTING JUST UNDER THE EARLOBES. PUSHING IT UP FURTHER TO THE FOREHEAD,

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CLAIMS

IT CAN BE USED AS A HEADBAND AND ALSO A SWEATBAND (NOT SHOWN).

2. A FACE MASK AS CLAIMED IN CLAIM 1 WHEREIN A FILTER IS ATTACHED TO THE MASK CREATING AN ALL IN ONE LOOK.

3. A FACE MASK AS CLAIMED IN CLAIM 1 WHEREIN, WORN INTERMITTENTLY, AID IS GIVEN IN THE PROTECTION AGAINST BREATHING IN UNPLEASANT SMELLS AND DUST SUCH AS IN STREET POLLUTION.

4. A FACE MASK AS CLAIMED IN CLAIM 1 WHEREIN THE ELASTIC STRIP ON SLIDERS EITHER SIDE ACTS AS AN ADJUSTABLE STRAP FOR A SNUG FIT.

5. A FACE MASK AS CLAIMED IN CLAIM 1 WHICH IS SOFT, LIGHTWEIGHT, DURABLE AND POCKET-SIZE.

6. A FACE MASK AS CLAIMED IN CLAIM 1

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CLAIMS

THAT IS STRETCHABLE AND MAY BE WORN AS A HEADBAND AND ALSO AS A SWEATBAND.

7. A FACE MASK AS CLAIMED IN CLAIM 1 THAT IS FLUORESCENT IN PARTS TO ENABLE IT TO BE SEEN AT NIGHT FROM CAR HEAD-LAMPS.

8. A FACE MASK AS CLAIMED IN CLAIM 1 THAT IS PERSONAL, FOR GENERAL USE BY THE GENERAL PUBLIC.

9. A FACE MASK AS DESCRIBED HEREIN WITH REFERENCE TO FIGURES 1-4 OF THE ACCOMPANYING DRAWINGS.

**Patents Act 1977**  
**Examiner's report to the Comptroller under**  
**Section 17 (The Search Report)**

Application number

9125872.3

**Relevant Technical fields**

(i) UK CI (Edition K ) A5T TCS, TCT, TCX

(ii) Int CI (Edition 5 ) A62B

**Search Examiner**

J A WALLIS

**Databases (see over)**

(i) UK Patent Office

(ii)

**Date of Search**

31 MARCH 1992

Documents considered relevant following a search in respect of claims 1 AT LEAST

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2236681 A (HARRY COLE) Flexible covering 1 comprising knitted fabric layers, filter 2	1 at least
X	GB 2162758 A (KIMBERLEY-CLARK) Face mask of flexible material conforming to user's face and incorporating a filter	1 at least
X	GB 2057891 A (AMERICAN CYANAMID) Flexible, filter face mask	1 at least
X	GB 1588442 A (SECRETARY OF STATE) Flexible mask comprising cloth filter	1 at least
X	GB 1566679 A (JOHNSON ETC) Flexible dust filtering mask	1 at least
X	GB 1449285 (JOHNSON ETC) Flexible mask comprising filter layer between facing fabrics	1 at least
X	US 4688566 (BOYCE) Eg lines 48-55, column 3	1 at least
X	US 4657010 (WRIGHT) Figures 4-7 embodiment	1 at least

Category	Identity of document and relevant passages	Relevant to claim(s)

### Categories of documents

**X:** Document indicating lack of novelty or of inventive step.

**Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.

**A:** Document indicating technological background and/or state of the art.

**P:** Document published on or after the declared priority date but before the filing date of the present application.

**E:** Patent document published on or after, but with priority date earlier than, the filing date of the present application.

**&:** Member of the same patent family, corresponding document.

**Databases:** The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed 6/8/2005, EAST Version: 2.0.1.4

**Patents Act 1977**  
**Examiner's report to the Comptroller under**  
**Section 17 (The Search Report)**

Application number

9125872.3

**Relevant Technical fields**

(i) UK CI (Edition ) Contd. from page 1

(ii) Int CI (Edition )

**Search Examiner**

J A WALLIS

**Databases (see over)**

(i) UK Patent Office

(ii)

**Date of Search**

31 MARCH 1992

Documents considered relevant following a search in respect of claims

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	US 4195629 (HALFORD) Flexible strechable face cover layer 1 to which filter 11 is attached	1 at least
X	US 3699958 (SZUCS) Strechable knitted fabric face mask; nb lines 30-40, column 3 and line 51, column 4 - line 4, column 5	1 at least



Category	Identity of document and relevant passages	Relevant to claim(s)

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PUB-NO: GB002262891A  
DOCUMENT-IDENTIFIER: GB 2262891 A  
TITLE: ALL IN ONE FACE MASK  
PUBN-DATE: July 7, 1993

INVENTOR-INFORMATION:

NAME	COUNTRY
MARSH, TERESA GENEVIEVE	N/A
MARSH, TERESA GENEVIEVE	N/A

ASSIGNEE-INFORMATION:

NAME	COUNTRY
MARSH TERESA GENEVIEVE	GB
MARSH TERESA GENEVIEVE	GB

APPL-NO: GB09125872

APPL-DATE: December 5, 1991

PRIORITY-DATA: GB09125872A ( December 5, 1991)

INT-CL (IPC): A62B018/02

EUR-CL (EPC): A41D020/00 ; A62B023/02, A41D013/11

US-CL-CURRENT: 128/203.29

ABSTRACT:

CHG DATE=19990617 STATUS=O> A face mask for covering nose, mouth and part of the chin is made of two-way stretch fabric 10 with a sewn-in durable **filter** 11 made of such material as three layers of muslin cloth and provided with an elastic strap 12 mounting adjustable sliders 13 at either side of the mask for a snug fit, the strap and a design 14 on the mask front are in **fluorescent colours** to enable them to be seen at night by car head lamps. The

mask is  
generally intended to give aid in protection against breathing-in  
unpleasant  
smells and dust, as in street pollution whilst walking/jogging  
through town and  
is lightweight, stretchable and pocket-size. It may be worn also as  
a headband  
or sweatband (not shown). <IMAGE>